In response to the restriction requirement, the Applicants provisionally elect Group I, **claims 1-5** with traverse. Additionally, the Applicants submit the following amendments and arguments prior to substantive examination.

1. (Original)   A method of processing transient errors produced in a color measurement system monitoring a color producing process, the method comprising:

implementing a model of the color producing process;

monitoring an input to the color producing process;

predicting an expected color signal based on the model and the monitored input;

measuring an output color produced by the color producing process to produce a measured color signal;

comparing the measured color signal to the expected color signal to produce a color error value, and;

selectively replacing the measured color signal based on the color error   value.

2. (Original)   The method of processing transient errors of claim 1 wherein selectively replacing the measured color signal comprises:

replacing the measured color signal with a predicted color signal based on the expected color signal.

3. (Original)   The method of processing transient errors of claim 1 further comprising:

storing a measured color value representative of the measured color signal in association with the monitored input.

4. (Original)   The method of processing transient errors of claim 1 wherein selectively replacing the measured color signal comprises:

replacing the measured color signal with an historical color signal based on an historical value related to the monitored input.

5. (Original)   The method of processing transient errors of claim 1

wherein implementing a model of the color production process comprises:

selecting at least one of a refined parameterized Neugebauer model, a multidimensional numerical model and an on-line statistical parameterized model representative of the color producing process.

6. (Original) A method for calibrating a color reproduction device, the method comprising:

producing an image with the reproduction device in response to an input signal requesting the production of a target color;

measuring with a sensor, a color of the produced image, to generate a measured color signal value;

calculating an estimated color signal value based on the input signal;

validating the measured color signal value by comparing it to the estimated color signal value;

selecting a preferred color signal value from among at least the measured color signal value, and the estimated color signal value , based on the validity of the measured color signal value;

determining an error between the preferred color signal value and the target color; and,

selectively adjusting parameters of a control system of the color reproduction device to minimize the determined error for subsequently produced images.

7. (Original) The method for calibrating a color reproduction device of claim 6 wherein calculating an estimated color signal value comprises:

using one of a Neugebauer model, a multidimensional numerical model and a regression of historical performance data of the color reproduction device, in conjunction with an input valued based on the input signal to generate the estimated color signal value.

8. (Original) The method for calibrating a color reproduction device of claim 6 wherein validating the measured color signal value comprises:

determining a deltaE value between the measured color signal

value and the estimated color signal value;

comparing the magnitude of the determined deltaE value with a predetermined threshold deltaE value; and,

generating a validity assessment of the measured color signal value based on the comparison.

9.　(Original)　The method for calibrating a color reproduction device of claim 6 wherein selectively adjusting parameters of a control system comprises:

selectively adjusting at least one tone reproduction curve.

10.　(Currently amended)　The method for calibrating a color reproduction device of claim ~~1~~ 6 wherein selecting a preferred color signal value from among at least the measured color signal value, and the estimated color signal value further comprises selecting a preferred color signal from among the measured color signal value, the estimated color signal value, and a value generated from historical system performance data.

11.　(Original)　A system including a color measurement sensor operative to monitor a color produced in a color producing process, the system comprising:

a color producing process;

a model of the color producing process, the model and the process operative to receive an input and respectively produce a model color signal and a process output;

a color sensor operative to produce a measured color signal representative of the process output color;

a preferred signal selector operative to select a preferred signal from among at least the model color signal, and the measured color signal; and,

a signal consumer operative to receive the preferred signal from the preferred signal selector.

12.　(Original)　The system of claim 11 wherein the signal consumer comprises:

a system controller operative to up date system control parameters based on the received preferred signal.

13.   (Original)   The system of claim 11 wherein the color producing process comprises:

a color printing process.

14.   (Original)   The system of claim 11 wherein the color producing process comprises:

a plant hydration process.

15.   (Original)   The system of claim 11 wherein the color producing process comprises:

a textile dying process.

16.   (Original)   The system of claim 11 wherein the color producing process comprises:

a food processing process.

17.   (Original)   The system of claim 13 further comprising:

a rendering device comprising at least one of a xerographic printer, an ionographic printer and an inkjet printer.

18.   (Original)   The system of claim 11 wherein the model of the color producing process comprises:

at least one of a refined parameterized Neugebauer model, a multidimensional numerical model and an on-line statistical parameterized model.

19.   (Original)   The system of claim 11 wherein the preferred signal selector is operative to select a preferred signal based on a difference between the measured color signal and a reference signal.